

REMARKS

This Amendment is in response to the Office Action dated August 24, 2006. All objections and rejections are respectfully traversed.

Claims 4-54 are in the case.

No claims are currently amended.

New claims 45 – 54 are currently added.

Request for Interview

The Applicant respectfully requests a telephonic interview with the Examiner after the Examiner has had an opportunity to consider this Amendment, but before the issuance of the next Office Action. The Applicant may be reached at 617-951-3074.

Rejections under 35 U.S.C. §101

At page 2 of the Office Action, claims 4,10,19,20,21,34,39 and 44 were rejected under 35 U.S.C. §101 because the Examiner erroneously asserted that the claims recite a use without setting forth any steps involved in the process.

Contrary to the Examiner's characterization, each of the rejected method claims rejected recites particular process steps and none of the rejected claims recite a "use." *See* MPEP 2173.05(q).

For example, claim 4, representative in part of the other rejected claims, sets forth:

4. A **method** for generating a point-in-time restoration of a set of database files and a set of associated log files to an active file system, the method comprising the steps of:

selecting, by a user, a backup to restore therefrom, the backup comprising a snapshot of a file system including the set of database files and copies of the associated log files;

verifying the selected backup for coherency;

copying, in response to the backup being coherent, the snapshot of the set of database files to the active file system; and

copying, in response to the backup being coherent, the copies of the associated log files to the active file system.

At page 3 of the Office Action, claims 4,10,14,17, 20-22, 25, 28, 31, 32 and 44 were rejected under 35 U.S.C. §101 because the Examiner erroneously asserted that the claims recite nothing but the physical characteristics of a form of energy and as such are nonstatutory natural phenomena.

Applicant again refers to claim 4 set forth above and respectfully submit that this rejection is without merit. Contrary to the Examiner's characterization, each of the rejected claims recite steps (such as those set forth in claim 4 above for example) or elements of media, systems, or apparatus that provide useful, concrete and tangible results. In particular, claim 4 includes steps which involve log files, database files and an active file system on a computer and provide tangible results on a computer apparatus. Since all of the claims clearly contain statutory subject matter, Applicant respectfully submits that the rejections under 35 U.S.C. §101 are improper and must be withdrawn.

Rejections under 35 U.S.C. §102

At page 4 of the Office Action, claims 34-36, 38-41, 43 and 44 were rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 6,311,193 to Sekido (hereinafter "Sekido").

Claim 34, representative in part of the other rejected claims, sets forth:

34. A method for generating a point-in-time restoration of a database to an active file system, the method comprising the steps of:

storing a first snapshot, the first snapshot taken at a first time, the first snapshot including a set of database files;

storing a copy of a first log file, the copy of the first log file associated with the first snapshot, the copy of the first log file including information that had not yet been incorporated into the database files as of the first time;

storing a copy of a second log file, the copy of the second log file associated with a second snapshot taken at a second time subsequent to the first time, the copy of the second log file including information received subsequent to the first time that had not yet been incorporated into the database files as of the second time; and

copying the first snapshot, the copy of the first log file, and the copy of the second log file to the active file system, to thereby restore at least a portion of the information received at the database subsequent to the first time without using the second snapshot

Sekido discusses snapshot management means which intervene between the file system and the nonvolatile storage devices and which create, for each of the non-volatile storage devices, a snapshot holding the contents of the files at a specific point in time and stores the snapshot into the corresponding nonvolatile storage device.

The Examiner asserts that

“Sekido discloses...storing a first log file, the copy of the first log file associated with the first snapshot, the copy of the first log file including information that had not yet been incorporated into the database files as of the first time; (col. 7, lines 20-44, Sekido);”

Applicant respectfully notes that Sekido at col. 7, lines 20-44 states:

Explanation will be given using a case where the file system 2 writes one block of data in the order shown in FIG. 9. In FIG. 9, Ln indicates a logical address transferred from the file system 2 and Sn represents the order of writing. In the computer system of the first embodiment, it is assumed that the writing buffer 8 can hold 15 blocks of data. In this case, the first S1 to S15 writing data items are put together into one stripe (ST1), which is then added with time stamp TS1 and written into an empty area of the disk device 4. Similarly, the S16 to S30 writing data items are put together into another stripe (ST2), which is then added with time stamp TS2 and written into another empty area of the disk device 4. Since the time

stamp i is incremented each time it has been written, TS1 and TS2 meets the expression: $TS1 < TS2$.

As seen from FIG. 9, the data items in the logical addresses L9 and L18 exist repeatedly in such a manner that they appear as the blocks at S5 and S2 in the stripe with time stamp TS1 and as the blocks at S19 and S21 in the stripe with time stamp TS2. When the order of writing is considered, it has to be judged that the data blocks at S19 and S21 are valid and the data blocks at S5 and S2 are invalid. The order of writing S_n used for the sake of convenience has not been written on the actual disk device 4.

Sekido is silent concerning Applicant's claimed **"copy of the first log file associated with the first snapshot, the copy of the first log file including information that had not yet been incorporated into the database files as of the first time."** Accordingly, Sekido is legally precluded from anticipating Applicant's claimed invention because of the absence from Sekido of Applicant's claimed novel log file.

Applicant submits that the logical address tag blocks disclosed by Sekido are composed of logical addresses and time stamps for (K-1) preceding data blocks in a stripe of a snapshot. Applicants respectfully submit that Sekido does not teach or suggest anything about log files separate from the snapshot, or **"log file including information that had not yet been incorporated into the database"** as particularly claimed.

The portion of Sekido that was cited by the Examiner as anticipating **"storing a copy of a first log file, the copy of the first log file associated with the first snapshot, the copy of the first log file including information that had not yet been incorporated into the database files as of the first time"** (Sieko col. 7, lines 20-44) discusses a process of judging an invalid block, and does not mention anything about log files or any related structure, much less **"storing a copy of a first log file... as particularly claimed."**

Applicant submits that neither the stripes nor the logical address tag blocks discussed by Sekido are related to the log files disclosed and claimed in the present application. Rather, the method of constructing updated stripes for a snapshot as described by Sekido teaches away from the presently claimed invention because it provides for managing snapshots without any need for log files.

Rejections under 35 U.S.C. §103

At page 6 of the Office Action, claims 4-33, 37 and 42 were rejected under 35 U.S.C. §103 over U.S. Patent No. 6,611,850 to Shen in view of Sekido. The Examiner admitted that “Shen didn’t disclose [sic]: copies of the associated log files.” Office Action page 6, line 18. The Examiner cited Sekido, col. 8, lines 30-58, and erroneously indicated that Sekido discloses copies of the associated log files.

Applicant respectfully submits that, contrary to the Examiner’s characterization, the cited portion of Sekido merely describes “the process of creating a snapshot” (col. 8, line 31) and does not teach or suggest anything about the log files that are particularly described and claimed in the present application.

Applicant respectfully submits that the combination of Shen and Sekido teaches away from Applicant’s claimed invention. As the Examiner admitted, “Shen didn’t disclose: [sic] copies of the associated log files.” (Office Action, page 6, line 18.) Rather, Shen discusses a method of selecting particular backup files for particular time periods. Sekido discusses snapshot management means to create a snapshot holding the contents of the files at a specific point in time and stores the snapshot into the corresponding nonvolatile storage device. A combination of Shen and Sekido would result in means for creating and

restoring from snapshots holding the contents of particular files for particular time periods. This combination would not include the use of Applicant's novel log files as claimed.

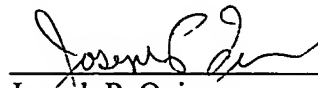
Since neither Shen or Sekido, alone or combined teach or suggest the **copies of the associated log files** that are required in each of the rejected claims, Applicant respectfully submits that the rejections under 35 U.S.C. §103(a) are improper and should be withdrawn.

All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and accordingly in condition for allowance.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



Joseph P. Quinn
Reg. No. 45,029
CESARI AND MCKENNA, LLP
88 Black Falcon Avenue
Boston, MA 02210-2414
(617) 951-2500